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At rest displacements from the vertical and/or torsion could be seen in 13 columns. The maximum deviation of the cephalic border of the sacrum from the horizontal was 5°; that of the first lumbar vertebra was 9°; that of any single vertebra was 6°.

In abduction, displacement in the lower segments is usually contralateral. Only 5 individuals showed homolateral movement at all 5 joints and in only 2 of these was it bilateral. Abduction was minimal at the lumbosacral joint. It was usually maximal at 1 or 2 of the 3 upper joints but occasionally it was maximal between L4 and L5. For any single segment the movements to the right and left were equal or unequal in about the same frequency. The total maximal displacement in any one individual was 36°; the minimal was 6°.

5. *Pattern perception after implantation of dielectric plates in the visual cortex.*[1] Nancy MINER* and R. W. SPERRY, Division of Biology, California Institute of Technology.

It has been found that dense implantation of tantalum wires throughout the visual cortex or extensive subpial slicing of the visual cortex in criss-cross patterns fails to produce any marked disturbance of detailed pattern perception in the cat. On the possibility that implanted wires and knife scars may not distort significantly the configuration of DC flow in the cortex, another test was conducted in which thin plates of mica were inserted vertically into the visual area. Most of the mica plates invaded the white matter for variable distances. They were placed in patterns designed to spare the optic radiation fibers but to effectively distort tangential direct current flow across the cortex. In 3 cats so treated, visual pattern discrimination was only slightly impaired and rapidly returned to approximately the preoperative level. The impairment was greater in two other cases, but in these latter two visual discrimination returned gradually in the course of 3 months to near the preoperative level. The degree of functional impairment seemed to be correlated primarily with the degree of invasion of the white matter and secondly with cortical damage. Taken together the findings fail to indicate a dependence of visual pattern perception upon the massive DC currents in the cortex as conceived in electrical field theory.

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2. *A reappraisal of the formation of the hair germ in hair follicles.* William MONTAGNA and Herman B. CHASE*, Department of Biology, Brown University.

The belief that hair follicles during the transition from the active to the quiescent state set aside a "hair germ" is not tenable. Chase (1954, Physiol. Rev.) has recently compiled abundant evidence against this view, and our observations on the effect of X-rays on human hair follicles are of particular interest. After the scalp is X-irradiated with 750 r, the entire matrix of the bulb degenerates. The upper bulb degenerates more gradually and becomes reduced to an attenuated cord of cells. Since a club fails to form, the hair is shed and the whole follicle becomes a solid cord of cells composed of cells from the ex-